

New [Developments] in the Theory (Cont.)

SOV/5556

9

Perchatkin, P.N. [Engineer], A.A. Bezimenzhnykh [Docent, Candidate of Technical Sciences], A.M. Bigoyev [Docent, Candidate of Technical Sciences], and V.N. Lotimov [Engineer], [Magnitogorsk Mining and Metallurgical Institute]. Effect of Furnace Atmosphere on the Behavior of Sulfur During Melting in the High-Capacity Open-Hearth Furnace

361

Ivanov, R.M. [Candidate of Technical Sciences], Ye. V. Abrosimov [Moscow Steel Institute]. Temperature Regime of the Oxygen-Blown Open-Hearth Bath

371

Samarin, A.M. [Corresponding Member of the Academy of Sciences USSR], and A.P. Potrusayev [Engineer], [Moscow Steel Institute]. Change in Metal Composition Caused by Oxygen Blowing

379

Fuklev, V.A. [Docent, Candidate of Technical Sciences, Sredneasiatskiy politeknicheskiy institut - Central Asia Polytechnic Institute]. Desiliconizing Pig Iron by Oxygen in a Special Spout While Pouring Iron Into the Open-Hearth Furnace

388

Card 13/14

FUKLEV, V.A.

Continuous tapping of cupola cast iron. Izv.vys.ucheb.zav.; chern.
met. 6 no.1:153-159 '63. (MIRA 16:2)

1. Sredne-aziatskiy politekhnicheskii institut.
(Cast iron—Metallurgy) (Cupola furnaces)

.FUKLEV, V.A.; OSAK, A.A.; SUBKHANKULOV, F.F.; TULYAGANOV, E.Kh.;
KLEYMAN, N.M.

Operation of a basic gas cupola with a refractory bed charge.
Lit proizv. no.6:35-36 Je '64. (MIRA 18:5)

FUKRA, J.

CZECHOSLOVAKIA/Nuclear Physics - Physical Base of Nuclear and
Thermonuclear Technology.

C

Abs Jour : Ref Zhur Fizika, No 1, 1960, 617

Author : Fukra, J.

Inst :

Title : Conference on Problems of Nuclear Technology Held in
Prague on 28 - 30 January 1959.

Orig Pub : Jaderna energie, 1959, 5, No 3, 105-106

Abstract : No abstract.

Card 1/1

The image shows a microfiche card with a grid of frames. The top frame contains the title "FUKS, A.A." and "Ca". The second frame contains the text "Investigation of the methods of working up both raw and dried potato mash into alcohol. A. Fuksa, V. Zh. Yutsev and P. Danilenko. Brod'skiye Prom. 11, No. 6, 6-11; Chem. Zvest. 1939, 1, 1828. The method of Lühder, Lampe and Klip (cf. C. A. 35, 1327) for drying potatoes was rechecked, as was the fermentation of the products. When the chopped potatoes (mash) were subjected to a pressure of 5 atms. 72.3% of moisture remained, at 10 atms. 62.0%; and at 20 atms. 58.8%. The pressed out liquors contained N compds., salts and starch. Centrifuging produced the same results as pressing at 5 atms. In the fermentation of the raw mash the alc. yield can be increased by the addn. of the expressed liquors. Mashies from dried potato pulp of high concn. ferment poorly. Mashies of low concn. give a poor alc. yield. A previous grinding of the pulp to a meal has a beneficial effect." The text is handwritten in black ink. The microfiche card is white with a black border. The text is in a serif font. The title "FUKS, A.A." is in a larger font than the rest of the text. The text "Ca" is in a larger font than the rest of the text. The text "Investigation of the methods of working up both raw and dried potato mash into alcohol. A. Fuksa, V. Zh. Yutsev and P. Danilenko. Brod'skiye Prom. 11, No. 6, 6-11; Chem. Zvest. 1939, 1, 1828. The method of Lühder, Lampe and Klip (cf. C. A. 35, 1327) for drying potatoes was rechecked, as was the fermentation of the products. When the chopped potatoes (mash) were subjected to a pressure of 5 atms. 72.3% of moisture remained, at 10 atms. 62.0%; and at 20 atms. 58.8%. The pressed out liquors contained N compds., salts and starch. Centrifuging produced the same results as pressing at 5 atms. In the fermentation of the raw mash the alc. yield can be increased by the addn. of the expressed liquors. Mashies from dried potato pulp of high concn. ferment poorly. Mashies of low concn. give a poor alc. yield. A previous grinding of the pulp to a meal has a beneficial effect." is in a smaller font than the title and "Ca". The text "M. G. Moore" is in a smaller font than the rest of the text. The microfiche card is white with a black border. The text is in a serif font. The title "FUKS, A.A." is in a larger font than the rest of the text. The text "Ca" is in a larger font than the rest of the text. The text "Investigation of the methods of working up both raw and dried potato mash into alcohol. A. Fuksa, V. Zh. Yutsev and P. Danilenko. Brod'skiye Prom. 11, No. 6, 6-11; Chem. Zvest. 1939, 1, 1828. The method of Lühder, Lampe and Klip (cf. C. A. 35, 1327) for drying potatoes was rechecked, as was the fermentation of the products. When the chopped potatoes (mash) were subjected to a pressure of 5 atms. 72.3% of moisture remained, at 10 atms. 62.0%; and at 20 atms. 58.8%. The pressed out liquors contained N compds., salts and starch. Centrifuging produced the same results as pressing at 5 atms. In the fermentation of the raw mash the alc. yield can be increased by the addn. of the expressed liquors. Mashies from dried potato pulp of high concn. ferment poorly. Mashies of low concn. give a poor alc. yield. A previous grinding of the pulp to a meal has a beneficial effect." is in a smaller font than the title and "Ca". The text "M. G. Moore" is in a smaller font than the rest of the text.

IKS. A. A., A. L. MALCHENKO, G. I. PARTMANOM.

Tekhnologiya Spritovogo Proizvodstva. (Technology of Spirit
Production) Posmertnoye Izd. Moskva, Pishchepromizdat, 1951. 583 P.
Illus., Tables, Diagr. "Literatura": P. 573

So: N/5
729.S1
.F9

KRYSANOV, V.I., inzh.; FUKS, A.I., inzh.; EL'YASBERG, M.Ye., inzh.

Technical and economic analysis of the dimensional spacing of
machine tools. Vest. mashinostr. 45 no.5:70-75 My '65.

(MIRA 18:6)

FUKS, A.S.

From practices in the operation of the Odessa Chromium Plant.
Kozh.-obuv.prom. 3 no.7:31-32 J1 '61. (MIRA 14:9)
(Odessa--Wage payment systems) (Tanning)

FUKS, A.

Wages based not on the operation but on the finished product.
Sots. trud 8 no.2:113-115 F '63. (MIRA 16:2)

1. Nachal'nik otdela legkoy i tekstil'noy promyshlennosti
normativno-issledovatel'skoy laboratorii po trudu, Odessa.
(Odessa—Wages—Leather industry)

FUKS, B. A.

"Experience With the Administration of Novocain and Morphine For Prevention of Operation Shock," Voenno-Med. Zhur., No. 11, p. 71, 1955.

FUKS, B.A.; BURKOV, Yu.A.

Using sand-jet perforation in the southern Raduy area. Nefteprom.
del. no.2:22-23 '64. (MIRA 17:4)

1. Gosudarstvennyy trest po geologicheskim izyskaniyam na neft'
v Vostochnoy Sibiri.

GINZBURG, E.L.; SAMSONOV, V.V.; FUKS, E.A.

Prospecting gas fields in the Irkutsk amphitheatre. Neftegaz.
geol. i geofiz. no.10:22-25 '64 (MIRA 18:1)

1. Gosudarstvennyy trest po geologicheskim izyskaniyam na nef't'
v Vostochnoy Sibiri.

FUKS, B.A.

O preobrazovaniyakh, ostavlyayushchikh dannuyu gruppu invariantnoy, I, tomsk, izv.
N II Matem. i Mekh, Un-ta, 1:1 (1935), 57-68.

SO: MATHEMATICS IN THE USSR, 1917-1947
edited by Jurosh, A. G.
Markushevich, A. L.
Rashovskiy, P. K.
Moscow-Leningrad, 1948

FUKS, B. A.

Ueber einige eigenschaften der pseudokonformen abbildung. Matem. SB., 1 (43),
(1936), 561-574.

SO: Mathematics in the USSR, 1917-1947
edited by Jurosh, A. G.
Markushevich, A. L.
Rashevskiy, P. K.
Moscow-Leningrad, 1948

FUKS, B. A.

Ueber geodasische mannigfaltigkeiten einer bei pseudokoformen abbildungen invarianten riemannschen geometrie. Matem. SB, 2 (44), (1937), 567-594.

SO: Mathematics in the USSR, 1917-1947
edited by Jurosh, A. G.
Markushevich, A. L.
Rashevskiy, P. K.
Moscow-Leningrad, 1948

Part 15: B

3

Euchs, B. Sur la fonction minimale d'un domaine. II.

Rec. Math. [Mat. Sbornik] N.S. 16(60): 329-346 (1946).
(Russian. French summary)

[For part I see the same Rec. N.S. 16(58), 21-38 (1945);
ibid. Rev. 7, 55.] Let $\alpha = [K_\alpha(t, l)]^{-1} M_\alpha(z, t, l)$,

where $M_\alpha(z, t, l) = [\partial \log M_\alpha(z, t, l) / \partial t]$, where $K_\alpha(z, l)$ is the

kernel function, $M_\alpha(z, t, l) = K_\alpha(z, l) / K_\alpha(t, l)$ the minimal

function, and $T_\alpha(t, l) = \partial^2 \log K_\alpha / \partial t \partial l$, map a given domain

B into its minimal and representative domains, respectively.

If the domain is simply-connected, the minimal and the

representative domains are both circles. The metrics

$A_1 ds^2 = K_\alpha^{-1} |dz|^2$ and $A_2 ds^2 = T_\alpha |dz|^2$ are invariant

with respect to conformal transformations. The A_1 metric

measures the curvature of certain curves connecting l and t .

At the point l and P the curves α are

orthogonal. Finally, let S_t be the distance (in the A_1 metric)

between l and z . The author determines α such that

$\lim_{t \rightarrow z} S_t \alpha = 1$, but if $(C_1 - 1) \alpha(C_1) - 4R > 0$. If $C_1 = 1$, $\alpha = 0$.

There exists a neighborhood of l such that, for every

z in this neighborhood, $S_t \alpha = 1$ if l is sufficiently close to z .

Similar inequalities can be obtained where we substitute

for S_t the distance in metric A_2 and for α the minimal func-

tion of the domain. The above generalizations of the lemma

of Schwarz-Pick are of interest because they can be extended

to the case of the theory of mapping of four-dimensional

domains by pairs of functions of two complex variables and,

on the other hand, as has been shown by Bergman [Amer. J.

Math. 68, 26-28 (1946); these Rev. 7, 236] and Schiffer

[see the preceding review], these functions are connected in

a simple manner with functions mapping the domain into a

circle or onto a line. Further interesting applications of

the results of one assumes that l and z approach the boundary

See also W. S. C. [M. P. Appl. 22, 25-26 (1946);
these Rev. 7, 236].

Small

Mathematical Reviews.

Vol

7

Fuchs, B. A.

Fuchs, B. A. Cauchy's integral formula in the theory of analytic functions of several complex variables. Uspehi Matem. Nauk (N.S.) 2, no. 3(19), 142-157 (1947). (Russian)

The author gives a review of generalizations (by Bergman, Bochner, A. Weil and others) of Cauchy's integral formula to the case of several complex variables and of some related questions. In the opinion of the reviewer this article does not give a true picture of the topic. The Cauchy formula is an integral expression reproducing analytic functions in the case of one variable, its kernel is independent of the domain; this is no longer the case for several variables. Since, in addition, the integration has to be carried out over special surfaces or hypersurfaces these formulae have considerably in value as means of investigation when we pass to several variables. On the other hand there exist other methods in several variables which lead to the desired results. This situation is not clarified in the review, which

has only a compilatory and formal character. The author does not even discuss the relation of the generalized Cauchy formulae to other residue formulae, not to mention their relations to the generalized Green's formulas, etc. Some essential bibliographical data are missing, e.g., the author does not indicate that formulae expressing the function in terms of its value on the boundary hypersurface and on the distinguished boundary surface were given by Bergman [Revista Ci. Lima 43, 675-682 (1941); 44, 131-140, 377-394 (1947), in particular p. 389; these Rev. 9, 140; Jber. Deutsch. Math. Verein 42, 238-252 (1933), respectively]; he cites only later papers. K. Zarankiewicz.

Source: Mathematical Reviews.

Vol 10 No. 4

Fuchs, B. A.

(*) Fuchs, B. A., and Šabat, B. V. Funktsii kompleksnogo peremennogo i nekotorye ih prilozheniya. [Functions of a Complex Variable and Some of Their Applications]. Gosudarstv. Izdat. Tehn.-Teor. Lit., Moscow-Leningrad, 1949. 383 pp.

This is a rather elementary introductory text which does not discuss theoretical details, but treats in a very detailed manner such topics as evaluation of integrals and special conformal mappings, with a profusion of applications to problems in electrostatics, hydrodynamics and heat flow.

R. P. Boas, Jr. (Evanston, Ill.).

Source: Mathematical Reviews,

Vol 12, No. 2.

Spies 8/22/80

FUKS, B. A.

21344 FUKS, B. A. Ob uchebnykh posobiya kh po matematike dlya zaochnikou.
Uspekhi matem. Nauk, 1949, Vyp. 3, S. 190-94.

SO: 'Ietopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

1. FUKS, B. A. AND SHABAT, B. V.
2. USSR (600)
4. Physics and Mathematics
7. Functions of A Complex Variable and Some of Their Applications, B.A. Fuks and B. V. Shabat. (Moscow-Leningrad, State Technical Press, 1949). Reviewed by A. F. Leontbev, Sov. Kniga, No. 1, 1950.

9. FDD Report U-3081, 16 Jan. 1953, Unclassified.

Fuks, B. A.

Fuks, B. A. Natural boundaries of analytic functions of complex variables. Uspehi Matem. Nauk (N.S.) 5, no. 4(38), 75-120 (1950). (Russian)

This paper is a review, accompanied by proofs, of well-known results about natural boundaries of analytic functions of several complex variables, results initiated by Harrold [Math. Ann. 62, 1-88 (1906)] and continued by Thullen [ibid. 106, 61-76 (1932)], Carathéodory and Thullen [ibid., 617-647 (1932)], and Oka [Jap. Math. 17, 517-521, 523-531 (1941); Tôhoku Math. J. 49, 15-52 (1942); these Rev. 3, 85; 7, 290]. The connection with the kernel function of Bergman are not discussed. A. Zygmund

Source: Mathematical Reviews,

FUKS, B. A.

Fuks, B. A. *Neevklidova geometriya v teorii konformnykh i psevдокonformnykh otobrazhenii. [Non-Euclidean geometry in the theory of conformal and pseudo-conformal mappings.] Gosudarstv. Izdat. Tehn. Teor. Lit., Moscow-Leningrad, 1951. 148 pp. 5.20 rubles.*

The present work is one of a series of small volumes, each devoted to an exposition of some aspect of non-Euclidean geometry. The author's principal emphasis is on Bergman's theory of the invariant metric and the relation of this theory to the classical portions of non-Euclidean geometry and conformal mapping. The material is self-contained, and is well-developed in the author's usual lucid style. However, the work suffers considerably because of the conspicuous absence of new material which has been developed over the past ten years by numerous writers and which serves to relate in a striking manner the theory of the kernel function and the invariant metric with potential theory [cf. Bergman, *The kernel function and conformal mapping*, Amer. Math. Soc., New York, 1950; these Rev. 12, 402].

Chapter 1 presents the development of Bergman's kernel function through the use of complete orthonormal complex analytic systems. The invariant metric is introduced, and the generalized lemma of Schwarz-Pick is proved. In chapter 2, the author establishes several differential-geometric characterizations of the invariant metric, and then turns to classical questions of Lobatchewskian geometry: groups of motions, distances, axioms of congruence, parallelism. Chapter 3 considers the geometry of automorphic functions. In chapter 4, the study of the lemma of Schwarz-Pick is resumed. Applications are made to Julia's distortion theorem. In chapter 5, the author turns to pseudo-conformal transformations of the space of two complex variables. The kernel function $K_D(z_1, z_2; \bar{z}_1, \bar{z}_2)$ is introduced, and by its means, Bergman's invariant metric

$$ds^2 = \sum_{\alpha, \beta=1}^n T_{\alpha\beta} dz_\alpha d\bar{z}_\beta; \quad T_{\alpha\beta} = -\frac{\partial^2 \log K_D}{\partial z_\alpha \partial \bar{z}_\beta}.$$

Finally, questions of curvature and infinitesimal transformations are discussed.

P. Davis.

Source: *Mathematical Reviews*,

Vol 13 No. 9

FUKS, B. A.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 625 - I

BOOK Call No.: AF451006

Author: FUKS, B. A. and LEVIN, V. I.

Full Title: FUNCTIONS OF A COMPLEX VARIABLE AND THEIR APPLICATIONS

Transliterated Title: Funktsii kompleksnogo peremennogo i nekotoryye
ikh prilozheniya

PUBLISHING DATA

Originating Agency: None

Publishing House: State Publishing House of Technical and
Theoretical Literature

Date: 1951 No. pp.: 307 No. of copies: 15,000

Editorial Staff: None

PURPOSE: The book is written for engineers and students of higher
technical colleges who wish a closer acquaintance with the theory
of functions of a complex variable and its application to the solu-
tion of technical and physical problems in mathematical analysis.

TEXT DATA

Coverage: In the preface, the authors mention that this book is co-
related with Funktsii kompleksnogo peremennogo i nekotoryye ikh
prilozheniya (1949), by B. A. Fuks and B. V. Shabat and both are
necessary to give the reader a knowledge of the principles of the
theory and its special applications. The book is divided into five

1/2

Funktsii kompleksnogo peremennogo i nekotoryye
ikh prilozheniya

AID 625 - I

chapters, subdivided into 30 sections. Chapters I and II are written by B. A. Fuks, chapters III and IV by V. I. Levin and chapter V by both authors jointly. Chapter I covers preliminary information and properties of algebraic functions in the vicinity of regular and singular points, and series development; chapter II, differential equations and analytical functions; chapter III, Laplace's differential equations, formula, and transformation; chapter IV, contour integration and asymptotic developments; chapter V, Hurwitz' problem for polynomials, which is essential in many applications. The book contains 29 figures and diagrams.

No. of References: A few Russian sources are given in the text and footnotes.

Facilities: None

2/2

FUKS, B. A.

Mathematical Reviews
Vol. 16 No. 2
Feb. 1964
Analysis

9-10-54
LL

①
4

Fuks, B. A. Natural boundaries of analytic functions of complex variables. Amer. Math. Soc. Translation no. 93, 59 pp. (1953).
Translated from Uspehi Matem. Nauk (N.S.) 5, no. 4(38), 75-120 (1950); these Rev. 12, 252.

USSR/Mathematics - Conformal representation

FD-1176

Card 1/1 Pub. 118-17/30

Author : Fuks, B. A.

Title : ~~Variation of lengths and directions under pseudoconformal transformations~~

Periodical : Usp. mat. nauk, 9, No 3(61), 193-200, Jul-Sep 1954

Abstract : The author shows how directions and lengths change under the following transformation: $W=W(w, z)$, $Z=Z(w, z)$, which are functions of complex variables w and z and regular at the point $P(w_0, z_0)$ and whose Jacobian $J(w, z)$ is different from zero at this point. He also shows how the modulus and argument of the Jacobian $J(w_0, z_0)=J$ are connected with these changes. Two references, both the author's (Teoriya analiticheskikh funktsiy mnogikh kompleksnykh peremennykh [Theory of analytical functions of many complex variables], State Technical Press, 1948. "Ueber einige Eigenschaften der pseudokonformen Abbildung," Mat. sbor., 1(1936)).

Institution :

Submitted : November 21, 1953

FUKS, B. A.

FUKS, B. A. Funkcje zmiennej zespolonej i niektore ich zastosowania. (Tlum. Ryszard Bittner. Redaktor Julian Bonder) Warszawa, Panstwowe Wydawn. Naukowe, 1954. 349 p. (Functions of a complex variable and their application. Tr. from the Russian. diagrs.) RPB Not in DLC

FUKS, B. A.
SCIENCE
Poland

So: East European Accession, Vol. 6, No. 5, May 1957

FUNCTIONAL

USSR/Mathematics - Conformal transformations

FD-1177

Card 1/1 Pub. 118-18/30

Author : Fuks, B. A.

Title : ~~Conditions for pseudoconformality in the transformation of four-dimensional space~~
Conditions for pseudoconformality in the transformation of four-dimensional space

Periodical : Usp. mat. nauk, 9, No 3(61), 201-204, Jul-Sep 1954

Abstract : In this article the author assumes particular forms for the equations of transformation $W=W(w,z)$, $Z=Z(w,z)$, which determine a mutually unique differentiable representation of a certain neighborhood of a point $P_0(w_0, z_0)$ onto a certain neighborhood of a corresponding point $P_0^*(W_0, Z_0)$. He then finds the conditions upon the parameters in these equations of transformation that ensure pseudoconformal transformations, namely in the form of three theorems. One reference (the author's own article preceding this one in the same issue).

Institution :

Submitted : November 21, 1954

FuKs, B.A.

Fuks, B. A. The geometric meaning of the argument of the Jacobian of a pseudoconformal mapping in the space of n complex variables. Uspehi Mat. Nauk (N.S.) 10 (1955), no. 1(63), 179-182. (Russian)
Let $(*)$ $w_k = w_k(z_1, \dots, z_n)$ ($k=1, \dots, n$) be regular at

the point $P(z_1^0, \dots, z_n^0)$, and let the Jacobian $J = J(z_1, \dots, z_n)$ be different from 0 at P . The author studies the linear mapping $w_k = \sum_{s=1}^n a_{ks} z_s$ ($k=1, \dots, n$) associated with $(*)$, where $a_{ks} = (\partial w_k / \partial z_s)_P$, and shows that, if the roots λ_s ($s=1, \dots, n$) of the equation $\det(a_{ks} - \lambda \delta_{ks}) = 0$ are all of modulus 1, $\lambda_s = e^{i\theta_s}$, then $\theta_1 + \dots + \theta_n = \arg J \pmod{\pi}$.

A. J. Lokwater (Helsinki).

ADW
1955

Fu Ks, B.A.

16(0)

PLANE I BOOK EXPLOITATION 507/3177
Matematika v SSR za sorv let, 1917-1957, tom 1: Obzoromnye stat'i (Mathematics in the USSR for Forty Years, 1917-1957) Vol. 1. Review Articles) Moscow, Fizmatgiz, 1959. 1002 p. 5,500 copies printed.

Eds: A. G. Kurosh, (Chief Ed.), V. I. Bityutskov, V. G. Bityutskiy, Ye. B. Dynkin, G. Ye. Shilov, and A. P. Yushkevich; Ed. (Inside book): A. P. Lepko; Tech. Ed.: S. M. Achlamov.

PURPOSE: This book is intended for mathematicians and historians of mathematics interested in Soviet contributions to the field.

COVERAGE: This book is Volume I of a major 2-volume work on the history of Soviet mathematics. Volume I surveys the chief contributions made by Soviet mathematicians during the period 1917-1957; Volume II will contain a bibliography of major works of Soviet mathematicians. This work follows the tradition set by two earlier works: Matematika v SSR za tridtsat' let (Mathematics in the USSR for 30 Years) and Matematika v SSR za tridtsat' let (Mathematics in the USSR for 30 Years). The book is divided into the major divisions of the field, i.e., algebra, topology, theory of probabilities, functional analysis, etc., and contains tributions and outstanding problems in each discussed. A listing of some 1400 Soviet mathematicians is included with references to their contributions in the field.

Volkovyskiy, L. I. Riemann Surfaces

Introduction

1. Classification of Riemann surfaces 472
2. Geometric theory of entire and meromorphic functions 472
3. Analytic and quasianalytic functions and differentials 476
4. Various problems. Problematics 477

Shabat, B. V. Generalization and Analogies of the Theory of Analytic Functions 480

Puts, B. A. Functions of Many Complex Variables 481

Gakhov, F. D., and B. V. Eshvedlize. Boundary-value Problems of the Theory of Functions of a Complex Variable 494

Smeytalskiy, V. V. Ordinary Differential Equations 498

1. Scientific aspects in the USSR in the field of ordinary differential equations 511

2. Analytic representation of solutions (problems of algorithmic solvability) of solutions (problems of 511

3. Asymptotes of the solutions of differential equations 514

4. Method of continuous extension (method of 519

5. Method of small parameter for finding periodic and almost periodic solutions and other related solutions 526

6. Degenerate systems of differential equations 529

7. Lyapunov stability 536

8. Existence theorems and general qualitative theory 538

9. Theory of dynamic systems and other generalizations of the theory of ordinary differential equations 547

FUKS, B.A.

SUBJECT USSR/MATHEMATICS/Theory of functions CARD 1/1 PG - 531
AUTHOR FUKS B.A.
TITLE Some new results in the theory of analytic functions of
several variables.
PERIODICAL Uspechi mat.Nauk 11, 5, 85-93 (1956)
reviewed 1/1957

Starting from the formulation of two Cousin's problems the author describes the development of the theory of functions of several variables. It is interesting that among the mentioned fundamental results there is no Russian result.

INSTITUTION: Moscow.

BERRI, R.Ya., dotsent; KOZYLYAYEV, P.A., dotsent; LUNTS, G.L., dotsent;
LIBIN, M.L., starshiy prepodavatel'; ROZENTAL', M.I., assistant.
Prinimali uchastiye: ~~FINKS, R.A.~~, prof.; VOYEYKOVA, S.V., dotsent;
KOZITSIN, V.I., dotsent; TEUSH, V.L., dotsent. ANOSHINA, K.I.,
red.; KUZ'MINA, N.S., tekhn.red.

[Higher mathematics; instructions and control problems for students
specializing in agriculture, fish culture, and forestry in upper-
level correspondence schools (departments)] Vysshaya matematika;
metodicheskie ukazaniya i kontrol'nye zadaniya dlia studentov sel'-
skokhoziaistvennykh, rybokhoziaistvennykh i lesokhoziaistvennykh
spetsial'nostei ssochnykh vysshikh uchebnykh zavedenii (fakul'tetov).
Pod red. G.L.Luntsa. Moskva, Gos.izd-vo "Sovetskaya nauka," 1958.
90 p. (MIRA 12:4)

1. Russia (1923- U.S.S.R.) Ministerstvo vysshego obrazovaniya.
Metodicheskoye upravleniye.
(Mathematics)

FUKS, Boris Abramovich, prof.; BAKHSHIYAN, F.A., prof.; ANDRIYEVSKIY, F.P., dotsent; MIROSHKOV, R.K., dotsent; NAGAYEVA, V.M., dotsent; SOBOLEV, N.A., dotsent; SOKOLOV, A.M., dotsent; SHAPIRO, Z.Ya., dotsent; SHUSHARA, G.N., dotsent; KAPLAN, I.B., starshiy prepodavatel'; POLOZKOV, A.P., starshiy prepodavatel'; POLOZKOV, D.P., starshiy prepodavatel'; TOPAZOV, N.G., starshiy prepodavatel'; SHCHERBAKOV, S.S., starshiy prepodavatel'; Prinimali uchastiye: GOL'DENVEYZER, A.L., prof.; BARANENKOV, G.S., dotsent; BERMAN, Ya.R., dotsent; LUNTS, G.L., dotsent; SHESTAKOV, A.A., dotsent; GUMURMAN, V.Ye., starshiy prepodavatel'; Rozental', M.I., assistant; SOKOLOVA, L.A., assistant. ROZANOVA, G.K., red.izd-va; KUZ'MINA, N.S., tekhn.red. (Continued on next card)

FUKS, Boris Abramovich--(continued) Card 2.

[Higher mathematics; methodological instructions and control assignments for the students of correspondence technical schools of university level] Vysshaya matematika; metodicheskie ukazaniia i kontrol'nye zadaniia dlia studentov zaочnykh vysshikh tekhnicheskikh uchebnykh zavedenii. Izd.9. Pod red. B.A.Fuksa. Moskva, Gos.izd-vo "Sovetskaiia nauka," 1958. 179 p. (MIRA 12:9)

1. Russia (1923- U.S.S.R.) Ministerstvo vysshego obrazovaniia. Metodicheskoye upravleniye.
(Mathematics--Study and teaching)

FUKS, B.A.

3-58-6-3/34

AUTHOR: Kuz'min, B.A., Candidate of Technical Sciences, Dotsent,
Fuks, B.A., Professor, Doctor of Physico-Mathematical Sciences

TITLE: Attended Courses Are Also Required (Nuzhny i ochnyye zanyatiya)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, Nr 6, p 16-19 (USSR)

ABSTRACT: The idea of the combined correspondence-resident system of schooling without an interruption in work, which has been practiced rather widely, is to organize practical and laboratory exercises at the training-consultation points, located at the students' place of work, for 6 to 7 months each year for 12 hours per week. Attendance at these lectures and other exercises is not obligatory. The organization of such exercises presupposes that a considerable number of correspondence students are concentrated at one place and that they study one or several related specialities. These exercises require the presence of instructors, equipped class rooms and laboratories. The author opposes the view of higher correspondence school workers, maintaining that the combined correspondence-resident system of study contradicts the nature of correspondence

Card 1/2

Attended Courses Are Also Required

3-48-6-3/34

schooling. He further points out that, notwithstanding the growing significance of the training-consultation points, this important link has so far not found the Ministry's due recognition. The author also contradicts reproaches to the effect that the correspondence-resident system of training without ceasing work, repeats the evening form of education. He considers it the most flexible and acceptable one for the workers of heavy industry and large enterprises.

ASSOCIATION: Vsesoyuznyy zaochnyy mashinostroitel'nyy institut (All-Union Machine Construction Correspondence Institute)

Card 2/2

16(1)

PHASE I BOOK EXPLOITATION

SOV/2336

Fuks, Boris Abramovich, and Boris Vladimirovich Shabat

Funktsii kompleksnogo peremennogo i nekotoryye ikh prilozheniya
(Functions of Complex Variables and Some of Their Applications)
2d ed. Moscow, Fizmatgiz, 1959. 376 p. (Series: Fiziko-
Matematicheskaya biblioteka inzhenera) 20,000 copies printed.

Ed.: M. L. Smolyanskiy; Tech. Ed.: Ye. A. Yermakova.

PURPOSE: This book is intended for students and Aspirants of vtuses
and also for engineers and scientists working on the application
of mathematics to physics and mechanics.

COVERAGE: This book discusses in detail the fundamental concepts of
the theory of functions of a complex variable. Among the topics
covered are complex numbers, analytic functions, conformal mapping,
elementary functions, and regular functions. Various applications
of the theory are also discussed, such as applications to plane
vector fields, to the theory of residues, representation of
functions by line integrals, etc. The book places great emphasis
on practical applications of the theory, and many examples and

Card 1/9

Functions of Complex (Cont.)

SOV/2336

problems are included. No personalities are mentioned. There are no references.

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APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513830002-9

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FURS, B. A.

Indicative to soviet problems with finally complete problems;
 Soviet study (Investigation of Modern Problems in the Theory of Complex
 Functions; Collection of Articles) Moscow, Harbin, 1960. 500 p.
 3,000 copies printed.

ML (vols 1-2): A. L. Markushevich. (Russian book); V. A. Vakhrameev and
 A. M. Lavrent'ev. (Russian book); E. M. Lavrent'ev.

Summary: This book is intended for specialists in the theory of functions of a
 complex variable. It may also be used by students of scientific research,
 scientific workers, and specialists in other fields of mathematics.

CONTENTS: The book contains 10 papers originally read at the 10th All-Union
 Conference on the Theory of Functions of a Complex Variable held at Moscow
 University from May 23 to June 5, 1957. The articles have been published
 in the main theory of functions and its applications. The book is divided
 into 7 parts. The first part discusses the problem of connectivity, power
 series, boundary and extremal properties. The second part discusses entire
 functions and interpolation problems. The third part
 discusses functions of many complex variables. The fourth part
 discusses conformal mappings and boundary-value problems. The fifth part
 discusses domains and the theory of distributions. The sixth part
 discusses generalized analytic functions. The seventh part
 discusses problems of the theory of functions of a complex variable.

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PART V

IL'YUKHINA, N.P.; FUKS, B.A.

Variegated Cretaceous sediments in the Kan-Tase/evo depression.

Trudy VSEGEI 66:107-115 '61.

(MIRA 1514)

(Yenisey Ridge--Geology, Stratigraphic)

FUKS, Boris Abramovich; AYZENBERG, L.A., red.; MURASHOVA, N.Ya., tekhr.
red.

[Theory of analytic functions of several complex variables] Teoriia
analiticheskikh funktsii mnogikh kompleksnykh peremennykh. Izd.2.
perer. i dop. Moskva, Fizmatgiz. Vol.1. [Introduction to the theory
of analytic functions of several complex variables] Vvedenie v teoriyu
analiticheskikh funktsii mnogikh kompleksnykh peremennykh. 1962.
418 p. (MIRA 15:7)

(Functions of complex variables)

FUKS, Boris Abramovich

[Special chapters of the theory of analytical functions
of several complex variables] Spetsial'nye glavy teorii
analiticheskikh funktsii mnogikh kompleksnykh peremennykh.
Moskva, Gos. izd-vo fiziko-matem. lit-ry, 1963. 427 p.
(MIRA 18:5)

FUKS, Boris Abramovich; AYZENBERG, L.A., red.; ZARUTSKAYA, V.V.,
red.; PLAKSHE, L.Yu., tekhn. red.

[Theory of analytic functions of several complex variables]
Teoriia analiticheskikh funktsii mnogikh kompleksnykh pe-
remennykh. Izd.2., perer. i dop. Moskva, Fizmatgiz.
Vol.2. [Special chapters on the theory of analytic functions
of several complex variables] Spetsial'nye glavy teorii ana-
liticheskikh funktsii mnogikh kompleksnykh peremennykh. 1963.
427 p. (MIRA 16:10)

(Functions, Analytic)

FUKS, Boris Abramovich; SHABAT, Boris Vladimirovich; BAYEVA, A.P.,
red.

[Functions of complex variables and some of their applica-
tions] Funkt i kompleksnogo peremennogo i nekotorye ikh pri-
lozheniia. Izd.3. Moskva, Izd-vo "Nauka," 1964. 387 p.
(MIRA 17:6)

KARASEV, I.P.; ZOLOTOV, A.N.; POSTNIKOV, V.G.; FUKS, B.A.

Some problems in the field prospecting of fractured carbonate
reservoir rocks in the Markovo oil field. Trudy VNIi no.43:
144-156 '65. (MIRA 18:6)

FUKS, B.B.; SHISHKIN, G.S.

Principles and methods of the histochemical analysis of enzymes.
Arkh. anat., gist. i embr. 44 no.6:103-113. Je '63.

(MIRA 17:7)

1. Laboratoriya gistokhimii (zav. - doktor med. nauk B.B. Fuks)
Instituta eksperimental'noy biologii i meditsiny Sibirskogo ot-
deleniya AN SSSR, Novosibirsk.

FUKS, B. B.

Jul/Aug 53

USSR/Medicine - Regeneration Tissues

"Correlation Between Direct and Indirect Cell Division During Regeneration of the Endothelium of the Eye," B.B. Fuks (Stalinsk)

Usp Sov Biol, Vol 36, No 1 (4), pp 100,101

Investigation of the process of regeneration of the corneal endothelium in frogs, rabbits, and humans, after mechanical injury, demonstrated that mitosis predominates at the height of regeneration. Karyokinetic division of nuclei of the 2-nucleus cells points to the possibility of mitosis succeeding amitosis. Amitosis provides physiological regeneration of the endothelium of the cornea and aids in its restoration after injury. Uniform amitosis predominates during physiological regeneration. In this respect, the process differs from that of pathological regeneration. The generally accepted, but false, Weismann-Morgan theory maintains that tissues produced by amitosis are inferior since no proper, uniform
(over)

FUKS, B.B., kandidat meditsinskikh nauk (Novosibirsk, Krasnyy pr., 11 kv.2)

Characteristics of growth of mouse ascites carcinoma in
the eye in rabbit and guinea pig. Vop.onk. 1 no.3:83-88 '55.

(MLPA 10:1)

1. Iz kafedry patologicheskoy anatomii Stalinskogo IUV (zaveduyushchiy
kafedroy - doktor meditsinskikh nauk A.G.Varshavskiy)

(EYE, neoplasms,

mouse ascites carcinoma, growth in guinea pigs & rabbits)

(NEOPLASMS, experimental,

mouse ascites carcinoma, growth in guinea pigs & rabbits)

EXCERPTA MEDICA Sec.12 Vol.12/5 Ophthalmology May 58
FUKS, B.B.

833. THE STRUCTURE AND VIABILITY OF STORED CORNEAL ENDOTHELIUM
(Russian text) - Fuks B. B. - ZH. OFTALM. 1956, 4 (240-242)

A strip of endothelium was removed from the posterior surface of the cornea taken from a freshly sacrificed rabbit. After this the cornea was stored in the blood serum of the same rabbit at 4° for 1-7 days. The cornea was kept in a thermostat (37°) for 48 hr. Following culturing, sections were prepared from the cornea and stained by haematoxylin. It was found that corneal epithelium preserved viability and the ability to 'epithelialize' the posterior surface of the cornea for up to 4 days of storage. A distinctive rearrangement of the tissue under investigation connected with processes of growth and multiplication of cells throughout the whole endothelial layer was noted. (S)

USSR / Human and Animal Morphology. Nervous System. S-2
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., 14, 1958, 64817.

Author : Fuks, B. B.

Inst : Not given.

Title : Concerning the formation of Nerve Fiber Plexuses
in the Wall of Blood Vessels by Traumatic Neuroma.

Orig Pub: V sb.: Vopr. travmatol, ortopedii i vosstanovit.
khirurgii. 2. Novosibirsk, 1957, 216-221.

Abstract: Histological and histochemical studies were made
of 100 human neuromas of 6 mos. to 18 yrs. dur-
ation and neuromas after 60 experiments on dogs,
rabbits and cats (2 to 18 mos. after section of
the sciatic nerve). It has been shown that around
the vessels of old traumatic neuromas in man and
animals, and in their outer coating, friable plexuses

Card 1/2

USSR / Human and Animal Morphology. Nervous System. S-2
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64817.

Abstract: of thin pulp-free fibers are formed. Their appearance is connected with the periodic flare-ups of regenerative changes of the fibers in the neuromas. The elements of the walls of the vessel and of the fibers of the nerve plexus do not contain alkali, but do contain active acid phosphomonoesterase. The fluctuation of pressure in the vascular network of the neuroma and the pulsation of the blood vessels may lead to the irritation of the fibers of the neuroma as well as of the fibers of the nerve plexuses in the vascular wall.

Card 2/2

USSR / Human and Animal Morphology. Nervous System. S-2
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64816.

Author : Fuks, B. B.

Inst : Not given.

Title : Data concerning Histochemistry and Histology of
Perineurial Sheaths in Traumatic Neuroma.

Orig Pub: V Sb. : Vopr. travmatol., ortopedii vosstamovit.
khirurgii. 2. Novosibirsk, 1957, 222-230.

Abstract: A histological and histochemical study was made
of 100 cases of traumatic neuroma in humans of
one and a half months to 18 years duration, and
neuromas principally of the sciatic nerve of 63
dogs, cats, and rabbits, one day to 18 months
after experimental trauma. In 10 experiments on
dogs, a chronic lymphovenous congestion was pro-
duced by means of a subcutaneous ligature of the

Card 1/3

USSR / Human and Animal Morphology. Nervous System. S-2
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64816.

Abstract: extremity. It has been shown that the perineural sheaths in neuroma have a double-layer structure: the inner endothelial layer passes over into a thin layer of collagenous fibers. The endothelium of the perineurial tube (PT) is connected by protoplasmic bridges with the connective cellular tissue in the fascicle of nerve fibers, and contains acid and alkali phosphomonoesterase. In the connective tissue within the PT and in the contents of the perineurial fissure, there are many polysaccharides. Enlargement of the PT does not occur when the lymphovenous flow from the extremity is interfered with. The perineurial sheaths formed in the process of the regeneration

Card 2/3

USSR / Human and Animal Morphology. Nervous System. S-2
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., 14, 1958, 64816.

Abstract: of nerves maintain favorable conditions for the alimentation of the nerve fibers. The formation of the PT upon the regeneration of the nerve is connected with the trophic proceeding from the regenerated nerve fiber.

Card 3/3

EXCERPTA MEDICA Sec.16 Vol.6/3 Cancer March 58

FUKS, B.B.

1016. *Intrabronchial dissemination of malignant adenomatosis of the lung (Russian text)*
Fux B. B. *Ark. Patol.* 1957, 19/4 (46-50 and 89-90) Illus. 3

Report on a case of malignant pulmonary adenomatosis in a 39-year-old man, in whom X-rays revealed caudo-apical spread of the malignant tumour, while no metastases were demonstrable in other organs (only the lymph nodes at the bifurcation were affected). On the basis of this case, mouse experiments were made with ascites carcinoma. The object was to determine whether intrabronchial spread of carcinomata is possible. Nine mice were intratracheally injected with 0.1 ml. carcinomatous ascitic fluid after tracheotomy. Two died shortly thereafter, while 7 died of asphyxia 7-9 days after the administration. Only 2 developed a tumour, cancer cells being demonstrable in the bronchi and alveoli and also in the lymph spaces. In 5 other experiments carcinomatous ascitic fluid was introduced into the lungs through the thoracic wall: carcinomatous pleurisy developed in 3 cases, while in 2 cases cancer infiltrated the lungs.

Brandt - Berlin

*Chair Pathol. Anatomy,
Inst. Advanced Training Physicians*

AUTHOR	FUKS B.B.	PA - 3181
TITLE	The Dynamic Of Phosphomonoesterase in the Process of Myelinization of Nerve Fibre. (Dinamika kisloy fosfomonoesterazy v protsesse mielinizatsii nervnogo volokna -Russian)	
PERIODICAL	Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 3, pp 692-694 (U.S.S.R.) Received 6/1957 Reviewed 7/1957	
ABSTRACT	<p>The formation of active acidous phosphomonoesterase round the axon cylinder during its regeneration was investigated. 25 traumatic neuromas of peripheral nerves, which were removed in the course of operations on men, were investigated and experiments with 10 rabbits and 10 dogs were carried out. The topography and the activity of the ferment were investigated on the gluteal nerves of 8 rabbits, 2 dogs and 2 human corpses. The experiments with dogs and rabbits were carried out in order to determine the time of existence of active acidous phosphomonoesterase round the axon (neurite). It was found either to occur a little earlier than the beginning of myelinization or to coincide with it. We may probably assume that the occurrence of active acidous phosphomonoesterase in the protoplasm of Schwann's cells is related to the beginning of the synthesis and further to the exchange of phospholipides of the myelin mantle. Considerable losses of phosphatase in the case of a slightly prolonged treatment of the preparations with fatty sol-</p>	

Card 1/2

The Dynamic of Phosphomonoesterase in the Process of PA - 3181
Myelinization of Nerve Fibre.

ving agents (especially in the case of heating) were observed, which permits us to conclude to a connection of the active ferment with the lipoid fraction of the myelin mantle.

(With 4 illustration and 5 citations from Slavic publications).

ASSOCIATION Institute of Plastic Surgery, Novosibirsk
PRESENTED BY ANNICHEOV N.N., Member of the Academy
SUBMITTED 11.6.1956
AVAILABLE Library of Congress
Card 2/2

FUKS, B.B. (Novosibirsk)

Histochemical study of mucopolysaccharides in sheaths of normal and regenerating nerves [with summary in English]. Arkh.pat. 20 no.10:59-68 '58 (MIRA 11:12)

1. Iz Novosibirskogo nauchno-issledovatel'skogo institut VOSKHITO (dir. dots. D.P. Metelkin, nauchnyy konsul'tant temy - chlen-korrespondent AMN SSSR prof. A.I. Strukov).

(MUCOPOLYSACCHARIDES, metab.

normal & regenerating nerve in animals & humans, histochem (Rus))

(NERVES, metab.

mucopolysaccharides in normal & regenerating nerve in animals & humans histochem (Rus))

FUKS, B

4-2-10/18

1
AUTHORS: Byalo, A., and Fuks, B.
TITLE: Health Technique (Tekhnika zdorov'ya)
PERIODICAL: Znaniye-Sila, 1958, ³³# 2, pp 26-27 (USSR)
ABSTRACT:

Six short articles accompanying photos.

1. High frequency irradiator for the even "massage" of tissues.
2. Plastic infant's inhaler cot for an "aerazol" mixture of antibiotics and oxygen. Sick infants often suffer from inadequate "gas exchange" and die from a lack of oxygen.
3. Ultra high frequency gear for healing hypertonic conditions, by irradiation of the solar plexus.
4. New portable electrocardiograph; unlike others which need photographic development, this inks its findings directly onto a strip of record-paper.
5. Universal "aerazol" inhaler, permitting the spraying of the medicament right into the lungs. The patient adjusts action by the lever, to suit her breathing.
6. Ultrasonic apparatus for diagnosing the growth of tumors; acts like radar through reflection from tissues of different density. Now being tested, will be widely used.

Card 1/2

Fuks, B.B.
AUTHOR: Fuks, B. B.

20-2-56/60

TITLE: The Histochemistry of the Succinoxidase System of a Normal and a Regenerating Nerve (Gistokhimiya suksinoksidaznoy sistemy normal'nogo i regeneriruyushchego nerva).

PERIODICAL: Doklady AN SSSR, 1958, Vol. 118, Nr 2, pp. 400-403 (USSR).

ABSTRACT: The connection between the respiration and the excitation-process in the nerve is expressed by data according to which the want of oxygen of the nerve depends on the frequency of the excitation of the nerve (reference 17). It may be assumed that the respiration of a resting nerve is also related to the function of nerve-excitation (reference 6) In several papers (references 1, 17) the opinion is voiced that the respiration in a nerve fiber is directly related to the synthesis of energy-rich compounds. These compounds are later, in the process of the nerve, consumed. By the study of the part played by respiration the problem of a possible significance of the biological oxidation for exchange processes was displaced to a second-order place. These processes are supposed to guarantee the rebuilding of the axoplasm-substance and of the medullary sheaths. It is supposed that the labile oxidase (references 15, 16; = cytochromoxidase according to reference 13) participates in the process of growth of the nerve fiber. Cyto-

Card 1/4

The Histochemistry of the Succinoxidase System of a Normal and a Regenerating Nerve. 20-256/60

chromoxidase is one of the enzymes of the succinoxidase system which catalyzes the oxydation of most of the tissue-substrata (reference 18). It is to be assumed that the respiration of a resting nerve is also related to the regeneration of the axoplasm-substance. It may further be assumed that in the regeneration of the nerve fiber just these exchange processes are activated with which under normal circumstances the new formation of the axoplasm-substance and the medullary sheaths is connected. Starting from these assumptions the author histochemically investigated 2 enzymes which form this system in a normal, a regenerating and a degenerating nerve. Cytochromoxidase and succindehydase were studied in 57 tests with dogs and rabbits (severing of the Nervus ischiadicus) and in 19 neuromas which were operatively removed from man. The duration of the tests was 1-25 days and 1-6 months. In incubations of the sections of a normal nerve cytochromoxidase first occurs in the nuclei, then in the perinuclear protoplasm and finally in the entire protoplasm of the endothelial cell of the capillary. In regenerations cytochromoxidase occurs in the axons and in the myelin sheaths of the central section in the place of injury. In traumatic neuroma of man the enzyme only occurs in the capillaries. 24 hours after the injury succindehydase occurred in the axons and their ac-

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The Histochemistry of the Succinoxidase System of a Normal and a Regenerating Nerve. 20-2-56/60

tivity increased in the myeline sheaths of the 2-3 mm long nerve section. When comparing the results first the agreement of the localization of the modifications of activity of the two enzymes in a normal and injured nerve becomes evident. In regenerations the activity of both components of the succinoxidase system increases just in those sections of the nerve fiber in which the formation of new nerve branches takes place. The activation of the process of the biological oxidation topographically and with respect to time agrees with the intensified process of new formation of the axoplasm-substance during the regeneration. In the same zone the activity of the acid phosphomonoesterase also increases (reference 4). The obtained results permit the formulation of the sentence on the connection of the increase in activity of the succinoxidase system with the processes of growth in the axonplasm of the regenerating nerve fiber. On the nature of the clubs at the end of the regenerating nerve fibers two opposed opinions exist in publications: clubs of growth and clubs of growth-inhibition. According to the author's results the first opinion would be correct. There are 4 figures, and 20 references, 10 of which are Slavic.

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The Histochemistry of the Succinoxidase System of a Normal and
a Regenerating Nerve. 20-2-56/60

ASSOCIATION: Scientific Research Institute for Orthopedics, Traumatology and
Plastic Surgery, Novosibirsk (Novosibirskiy nauchno-issledovatel'-
skiy institut ortopedii, travmatologii i vosstanovitel'noy khirurgii).

PRESENTED: August 30, 1957, by L. A. Orbeli, Academician.

SUBMITTED: August 27, 1957.

AVAILABLE: Library of Congress.

Card 4/4

FUKS, Boris Borisovich; TSKELLARIUS, Yu.G., otv.red.; BUSHUYEVA, V.M.,
red.; MAZUROVA, A.Y., tekhn.red.

[Histochemistry and morphology of the normal and injured nerve;
histochemical study of the mechanisms of nerve development]
Gistokhimiia i morfologiya normal'nogo i povrezhdennogo nerva;
opyt gistokhimicheskogo izucheniia mekhanizmov razvitiia nerva.
Novosibirsk, Izd-vo Sibirskogo otd-niia Akad.nauk SSSR, 1959.
197 p. (MIRA 13:4)

(NERVES)

17(3,4)

AUTHOR:

Fuks, B. B.

SOV/20-125-4-61/74

TITLE:

Histochemistry of the Phosphomonoesterases During the Regeneration and Degeneration of a Nerve After Injury
(Gistokhimiya fosfomonoesteraz pri regeneratsii i degeneratsii nerva posle povrezhdeniya)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 4, pp 905-908 (USSR)

ABSTRACT:

Recently papers were published which deal with the localization of the acid phosphomonoesterase in a normal and in an injured nerve (Refs 3,6,7,9,10,12,15,18,19). This enzyme was found in a normal nerve fiber in the axon and in the medullary sheath. Several research workers assume that the intensified colorability of the nerve fiber in the central section of the cut through nerve is not a result of an intensified fermentative activity but the result of the variation of the physico-chemical properties of the fibers. The alkaline phosphomonoesterase was found in the sheath of Schwann as well as in the axon (Refs 3,6,10,15,18). The present paper is to deal with the dynamics of the phosphomonoesterases as mentioned in the title. The results are to be compared with those obtained by the impregnation methods. For this purpose 78 experiments were

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Histochemistry of the Phosphomonoesterases *During* the Regeneration and Degeneration of a Nerve After Injury SOV/20-125-4-61/74

carried out with the cutting through of the nervus ischiadicus of rabbits, cats, and dogs; and the nervus ischiadicus of two persons who died of diseases was used. The preparations were extracted 1,3,6,10,15,20,25, and 30 days and 1,5; 2; 2,5; 4, and 6 months after the operation. 5 variants were tested in order to choose an optimum method of the preparation of cuts. The best results were obtained by the fourth variant: cuts from a recently frozen in nerve, fixation of the cuts in alcohol, rinsing, incubation, and by the fifth variant: film preparation from fresh nerve, fixation ... etc (see point Nr 4). ... Control investigations 1-10 were carried out in order to eliminate the feared (diffusion- and adsorption) artifacts. The comparison of the aforesaid facts with own data and those given in other papers obtained by means of the impregnation method make possible the conclusion that the increase of activity of the acid phosphatase takes place in the zone of an intensified regeneration of neutral branches (in the injured as well as in the new nerves as well as in growth-clubs). The author believes that these facts confirm the

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Histochemistry of the Phosphomonoesterases During the Regeneration and De-
generation of a Nerve After Injury

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hypothesis (Ref 11) according to which the metabolism in the zone of regeneration of nerve fibers is increased and the synthesis predominates. It is a local increase of metabolism which is not effective in the entire axon. Initially it is observed even in the case of lacking connection with the nerve-cellular body. There is, however, no reason for speaking of an autonomy of this process (Ref 11), since (Refs 10,13) variations of the fermentative activity take place at the other end of the cut off neuron in the nerve-cellular body as well. There are 4 figures, 1 table, and 19 references, 8 of which are Soviet.

ASSOCIATION: Novosibirskiy institut vosstanovitel'noy khirurgii (Novosibirsk Institute of Restitutive Surgery)

PRESENTED: November 19, 1958, by N. N. Anichkov, Academician

SUBMITTED: July 7, 1958

Card 3/3

FUKS, B. B., KOLAYEVA, S. G.

"The Histochemistry of Proteins During Growth Changes and the Regeneration
of the Connective Tissue of the Skin and Aorta in Humans and Animals."

report submitted for the First Conference on the problems of Cyto and
Histochemistry, Moscow, 19-21 Dec 1960.

Laboratory of Histochemistry, Division of Experimental Biology and Pathology of the
Institute of Experimental Biology and Medicine, Siberian Division, Academy of Sciences
USSR, Novosibirsk.

VINOGRADOV, V.V.; FUKS, B.B.

System for the differential histochemical analysis of mucopolysaccharides.
Izv.Sib.otd.AN SSSR no.9:168-170 '60. (MIRA 13:11)

1. Institut eksperimental'noy biologii i meditsiny. Novosibirskiy
meditsinskiy institut.
(Polysaccharides)

DERIBAS, V.I.; FUKS, B.B.; SHISHKIN, G.S.

Activation of lipolytic enzymes in the wall of the human aorta in atherosclerosis. Dokl.AN SSSR 134 no.2:443-444 S '60.

(MIRA 13:9)

1. Institut eksperimental'noy biologii i meditsiny Sibirskogo otdeleniya Akademii nauk SSSR. Predstavleno akad. N.N. Anichkovym.

(ARTERIOSCLEROSIS) (LIPASES) (ESTERASES) (AORTA--DISEASES)

NUKS, B.B.

Histochemistry of tyrosine and histidine during the regeneration of
connective tissues. Dokl. AN SSSR 135 no.3:747-749 H '60.

(MIRA 13:12)

1. Institut eksperimental'noy biologii i meditsiny Sibirskogo
otdeleniya Akademii nauk SSSR. Predstavleno akad. V.A. Engel'gardom.

(TYROSINE)

(HISTIDINE)

(COLLAGEN)

(REGENERATION (BIOLOGY))

VINOGRADOV, V.V.; FUKS, B.B.

Differential histochemical determination of mucopolysaccharides.
Ark. pat. 23 no.2:74-78 '61.
(POLYSACCHARIDES) (MIRA 14:2)

FUKS, B.B.; LEVIN, Yu.M.

Histochemical and biochemical study of enzymes of the succinic oxidase system of the cortex and the medulla oblongata in a hemorrhagic collapse.
Vop. pat. i reg. org. krov. i dykh. no.1:133-138 '61. (MIRA 18:7)

FUKS, B.B.; YASTREBOVA, I.P.

Materials on the histochemistry of connective tissues in regeneration
and transplantation. Vop. pat. i reg. org. krov. i dykh. no.1:141-151
'61.
(MIRA 18:7)

FUKS, B.B., doktor med.nauk

Chemistry and scalpel. Nauka i zhizn' 29 no.1:44-46 Ja '62.
(MIRA 15:3)

1. Zaveduyushchiy laboratoriyey gistokhimii Instituta eksperiment-
tal'noy biologii i meditsiny Sibirskogo otdeleniya AN SSSR.
(Cardiovascular research)

FUKS, B.B.; LEYTES, F.L.; DERIBAS, V.I.; SHISHKIN, G.S.

Studying the pathogenesis of atherosclerosis by histochemical determination of esterases and lipases. Dokl. AN SSSR 143 no.1:245-248 Mr '62.
(MIRA 15:2)

1. Institut eksperimental'noy biologii i meditsiny Sibirskogo otdeleniya AN SSSR i Tsentral'nyy institut kurortologii i fizioterapii. Predstavleno akademikom N.N.Anichkovym.
(ARTERIOSCLEROSIS)
(CHOLESTEROL METABOLISM)

MESHALKIN, Ye.N.; ~~FUKS, B.B.~~; STEFANOVICH, L.Ye.; SERGIYEVSKIY, V.S.;
KONSTANTINOVA, I.V.; DEVOYNO, L.V.; MEDVEDEV, I.A.

Using protease-treated collagenous and elastic "carcasses"
from heterologous material for vascular grafts. Izv. Sib. otd.
AN SSSR no.5:129-132 '62. (MIRA 18:2)

1. Institut eksperimental'noy biologii i meditsiny Sibirskogo
otdeleniya AN SSSR, Novosibirsk.

FUKS, B.B.; KONSTANTINOVA, I.V.; STEFANOVICH, L.Ye.; DEVOYNO, L.V.;
SERGIYEVSKIY, V.S.; FALK, I.G.; MODYAYEV, V.P.

Influence of some factors on the growth and differentiation of the
connective tissue in the regeneration of the cornea, aorta, tendons
and bones in biological frameworks. Dokl. AN SSSR 152 no.5:1260-1262
O '63. (MIRA 16:12)

1. Institut eksperimental'noy biologii i meditsiny Sibirskogo
otdeleniya AN SSSR. Predstavleno akademikom N.N.Anichkovym.

*

FUKS, B.B.; KONSTANTINOVA, I.V.; STEFANOVICH, L.Ye.; LUK'YANOVA, I.G.;
TSYGANKOV, L.I.; KOLAYEVA, S.G.; KRASS, I.M.; VAN'KO, L.V.

Specific biosynthesis of antibodies induced by ribonucleic acid from
the lymphatic nodes and spleen of immune rabbits. Dokl. AN SSSR 153
no.2:485-488 N '63. (MIRA 16:12)

1. Institut tsitologii i genetiki Sibirskogo otdeleniya AN SSSR.
Predstavleno akademikom A.N.Belozerskim.

*

FUKS, B. B.; KONSTANTINOVA, I. V.; KOLAYEVA, S. G.; TSYGANKOV, A. I.; SHEL'GA, V. A.
KRASS, P. M. MAKSIMOVSKIY, L. F.

"Anti-BSA formation initiated in vivo and in vitro by ribonucleic acid from lymph nodes and spleen of immunized rabbits (Histochemical, biochemical and immunological investigation)."

report submitted for 2nd Intl Cong, Histochemistry & Cytochemistry, Frankfurt, 16-21 Aug 64.

Moscow.

Dept of Experimental Biology, Inst of Cytology & Tenetics, AS USSR, Novosibirsk 72.

FUKS, B.B. (Novosibirsk); VINOGRADOV, V.V. (Novosibirsk); SHISHKIN, G.S.
(Novosibirsk); MAKSIMOVSKIY, L.F. (Novosibirsk)

Histochemical study of proteins, mucopolysaccharides, certain
enzymes and deoxyribonucleic acid in skin wounds in alimentary
and alimentary-chemical vitamin C deficiency. Arkh. pat. no.1:
39-47 '64. (MIRA 17:11)

1. Iz laboratorii gistokhimii (zav. - doktor med. nauk B.B. Fuks)
Instituta eksperimental'noy biologii i meditsiny (dir. - prof.
Ye.N. Meshalkin) Sibirskogo otdeleniya AN SSSR i laboratorii
nukleinovyykh kislot (zav. - kand. med. nauk R.I. Salganik) Insti-
tuta tsitologii i genetiki (dir. K.D. Belyayev).

FUKS, B.B.; KONSTANTINOVA, I.V.; TSYGANKOV, A.P.

Immunological and histochemical study of the biosynthesis of specific antibodies induced by ribonucleic acid from the cells of immunized animals. Vest. AMN SSSR 19 no.12:28-39 '64.

(MIRA 18:4)

1. Institut morfologii cheloveka AMN SSSR, Moskva.

FUKS, E.B.

Immunogenesis and tissue differentiation. Vest. AMN SSSR 20 no.11:
66-80 '65 (MIRA 19:1)

1. Institut morfologii cheloveka AMN SSSR, Moskva. Submitted
July 23, 1965.

FUKS, B.I., professor

Blastomogenic effect of orthoaminoazotoluene during repeated chloroform treatment. Trudy AMN SSSR 21 no.4:164-170 '52.

(MLRA 10:8)

1. Iz laboratorii onkologii (zav. - chlen-korrespondent AMN SSSR prof. L.M.Shabad) Instituta normal'noy i patologicheskoy morfologii AMN SSSR i kafedry onkologii (zav. - prof. B.I.Fuks) Novosibirskogo instituta usovershenstvovaniya vrachey.

(CARCINOGENS,

o-aminoazotoluene with chloroform)

(TOLUENE, derivatives,

o-aminoazotoluene, carcinogenic eff., with chloroform)

(CHLOROFORM, effects,

carcinogenic, with o-aminoazotoluene)

FUKS, B.I.; PERKIN, E.M.; KAN'SHINA, N.F.

Experimental histochemical analysis of the development of
ischemic necrosis and a cicatrix of the myocardium. Dokl. AN
SSSR 145 no.5:1154-1157 '62. (MIRA 15:8)

1. Novokuznetskiy institut usovershenstvovaniya vrachey
i Institut eksperimental'noy biologii i meditsiny Sibirskogo
otdeleniya AN SSSR. Predstavleno akademikom N.N. Anichkovym.
(HEART--NECROSIS) (HISTOCHEMISTRY)

ASHKINUZI, Zus' Kivovich; MAMUNYA, Anton Ustinovich; SEMERNYA, Vladimir Mikhaylovich; YANOVSKIY, Vitaliy Sergeyevich; MALCHENKO, A.L., doktor tekhn. nauk, prof., spets red.; FUKS, B.K., red.; PEREDERIY, S.P., tekhn. red.

[Continuous rapid cooking of starchy raw materials in the distilling industry] Nepreryvnoe skorostnoe razvarivanie krakmalistogo syr'ia v spirtovom proizvodstve. Moskva, Pishchepromizdat, 1960. 54 p.

(MIRA 14:10)

(Distillation)

FUKS, D.A., inzh.; NOVODEREZHKIN, V.V., inzh.; SHEYNINA, F.B., inzh.;
IZRAILEVA, E.S.; DUROV, V.P., inzh.

New method for using storage batteries in electric power stations
and substations. Energetik 12 no.7:27-29 J1 '64.

(MIRA 17:9)

VINOGRADOV, A.; DELONE, B.; FUKS, D.^B

Rational approximations of irrational numbers with bounded partial
quotients. Dokl.AN SSSR 118 no.5:862-865 F '58. (MIRA 12:1)

1. Chlen-korrespondent AN SSSR (for Delone).
(Numbers, Theory of)

10

6(1)

AUTHORS: Fuks, D.B., and Shvarts, A.S.

SOV/20-125-2-11/64

TITLE: Cyclic Products of the Polyhedron and the Imbedding Problem
(Tsiklicheskiye stepeni poliedra i problema vlozheniya)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 2, pp 285-288 (USSR)

ABSTRACT: Let K be a polyhedron, p -- prime number; $K^p = K \times \dots \times K$ be the product of p polyhedra K ; let $t: K^p \rightarrow K^p$ be a transformation with the period p defined by the formula $t(x_1, x_2, \dots, x_p) = (x_2, \dots, x_p, x_1)$; let $Z_p(K)$ be the p -th cyclic power of the polyhedron K , i.e. that space arising from K^p if the points equivalent with respect to the transformation t are identified; let $\pi: K^p \rightarrow Z_p(K)$ be the natural projection; let $i: K \rightarrow K^p$ be the diagonal imbedding; $i(x) = (x, \dots, x)$; $i' = \pi i$. The author calculates the spectral sequence of the cohomologies with compact carriers with respect to the modulus p of the regular covering $\pi: K^p \rightarrow Z_p(K)$. Some applications of

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Cyclic Products of the Polyhedron and the
Imbedding Problem

SOV/20-125-2-11/64

the obtained results are mentioned. The results partly overlap
with those of Giorgiutti [Ref 6] and Wu Wen-tsün [Ref 1,2,3].
There are 8 references, 2 of which are French, 2 American,
1 Japanese, and 3 Chinese.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova,
Voronezhskiy gosudarstvennyy universitet (Moscow State University
imeni M.V.Lomonosov; Voronezh State University)

PRESENTED: November 28, 1958, by P.S.Aleksandrov, Academician

SUBMITTED: November 23, 1958

Card 2/2

FUKS, D.B.

Homotopic duality. Dokl. AN SSSR 141 no.4:818-821 D '61.
(MIRA 14:11)
1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
Predstavleno akademikom P.S. Aleksandrovym.
(Topology)

FUKS, D.B. (Moskva)

Natural mappings of functors in the category of topological
spaces. Mat. sbor. 62 no.2:160-179 0 '63. (MIRA 16:10)

FUKS, E.S.

CH *✓* *U.S.S.R.:* Krashenie khlopchatobumazhnoi pryazhi
(Dyeing of Cotton Yarn). Moscow: Gosudarst. Nauch.-
Tekh. Izdatel'stvo Legkol Proem. 1952. 207 pp.

YUKS, Mamamail Solomonovich; ARKHANGEL'SKIY, S.S., redaktor; NEKRASOVA
O.I., tekhnicheskiiy redaktor.

[PK-1 yarn dyeing apparatus] Priashekrasil'nyi apparat PK-1.
Moskva, Gos.nauchno-tekhn.isd-vo Ministerstva promyshl.tovarov
shirokogo potrebleniia SSSR, 1955. 107 p. (MLRA 8:10)
(Dyes and dyeing--Apparatus)

POLYANSKAYA, O.V.; FUKS, E.Ye., kand.med.nauk

Organizing the medical technicians' work in Moscow Maternity
Hospital No.10. Zdrav. Ros. Feder. 5 no.9:7-10 S '61.
(MIRA 14:9)

1. Iz rodil'nogo doma No.10 Moskvyy.
(MOSCOW—HOSPITALS—STAFF)

POLYANSKAYA, O.V., kand.med.nauk; FUKS, E.Ye. (Moskva)

Improved efficiency in medical documentation in the maternity
home. Sov.zdrav, 21 no.10:58-59 '62. (MIRA 15:10)

1. Iz roditel'nogo doma No.10 (glavnyy vrach O.V.Polyanskaya) Moskvyy.
(MATERNITY HOMES--ACCOUNTING)

TULYAGANKHODZHAYEV, A. (Tashkent); FUKS, G., obshchestvennyy
kontroler (Tashkent)

Corrections dictated by life. Sov. torg. 36 no.8:41-42
Ag '63. (MIRA 16:11)